758C

Weight Indicating Instrument

With Body Mass Index Features

Owner's Manual

8555-M210-O1 Rev H
11/08

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INTRODUCTION

Thank you for purchasing our 758C Weight Indicating Instrument. It has been manufactured with quality and reliability at our factory in Webb City, MO USA. This Indicator has been tested before leaving our factory to insure accuracy and dependability for years to come.

This manual is provided to guide you through installation, operation and maintenance of your indicator. Please read it thoroughly before attempting to install or operate your 758C and keep it handy for future reference.

PROPER DISPOSAL

When this device reaches the end of its useful life, it must be properly disposed of. It must not be disposed of as unsorted municipal waste. Within the European Union, this device should be returned to the distributor from where it was purchased for proper disposal. This is in accordance with EU Directive 2002/96/EC. Within North America, the device should be disposed of in accordance with the local laws regarding the disposal of waste electrical and electronic equipment.

It is everyone's responsibility to help maintain the environment and to reduce the effects of hazardous substances contained in electrical and electronic equipment on human health. Please do your part by making certain that this device is properly disposed of. The symbol shown to the right indicates that this device must not be disposed of in unsorted municipal waste programs.

FCC COMPLIANCE STATEMENT

WARNING! This equipment generates uses and can radiate radio frequency and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference in which case the user will be responsible to take whatever measures necessary to correct the interference.

You may find the booklet "How to Identify and Resolve Radio TV Interference Problems" prepared by the Federal Communications Commission helpful. It is available from the U.S. Government Printing Office, Washington, D.C. 20402. Request stock No. 001-000-00315-4.

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Serial Number _____

Date of Purchase _____

Purchased From _____

_____

_____

_____

RETAIN THIS INFORMATION FOR FUTURE USE

PRECAUTIONS

Before using this indicator, read this manual and pay special attention to all "WARNING" symbols:

IMPORTANT

ELECTRICAL WARNING

SPECIFICATIONS

Power Requirements	6 “C” cell Alkaline, Ni-Cad or NiMH batteries (*not included*) *OR* an optional 115 VAC 50/60Hz 12 VDC 300 mA wall plug-in UL/CSA listed AC adapter (Cardinal part number 728R121). Also available for 230 VAC 50/60 Hz (Cardinal part number 728R901)
Operating Temperature	14 to 104 ºF (-10 to +40 ºC)
Display	Weight: Five digit, seven segment, 1/2" high LCD Height: Four digit, seven segment, 3/8" high LCD
Sensitivity	1.2 uV/division (0 to 3.0 mV/V), Class III
Signal Input Range	0 to 15mV max.
Transducer Excitation	5.0 VDC
Number of Load Cells	up to 4 each 350Ω
Load Cell Cable Length	10 feet max.
Resolution	5,000 divisions
Capacities	1,000 to 5,000 divisions commercial up to 10,000 divisions noncommercial
Division Value	1, 2, 5 or 10 x 1, 0.1, 0.01, 0.001
Sample Rate	1 to 10 samples per second selectable
Auto Zero Range	0.5 or 1 through 9 divisions
Weighing Units	Pounds, kilograms, ounces, grams or Stones and pounds/kilograms
Keyboard	Membrane type with 19 keys
Enclosure Size	8" W x 6 5/8" H x 2 1/8" D (204 mm W x 168 mm H x 54 mm D)
Construction	Painted Steel

Standard Features:

- Metric Conversion
- Auto Shut-Off Feature
- Serial I/O (Input/Output)
- Selectable Sleep-Mode
- Selectable Filtering
- USB Printer Port
- Port for Optional DHR (Digital Height Rod)

Optional Features:

- 758-IP Ethernet Option
- Detecto DHR (Digital Height Rod)
- Optional 12V AC/DC Power Adapter

CARE AND CLEANING

1. **DO NOT** submerge indicator in water, pour or spray water directly on indicator.
2. **DO NOT** use acetone, thinner or other volatile solvents for cleaning.
3. **DO NOT** expose equipment to temperature extremes.
4. **DO NOT** place equipment in front of heating/cooling vents.
5. **DO** clean the indicator with a damp soft cloth and mild non-abrasive detergent.
6. **DO** remove power before cleaning with a damp cloth.
7. **DO** provide clean AC power and adequate protection against lightning damage.
8. **DO** keep the surroundings clear to provide clean and adequate air circulation.

INSTALLATION

Unpacking

Carefully remove indicator from shipping carton and inspect it for any damage that may have taken place during shipment. Keep carton and packing material for return shipment if it should become necessary. The purchaser is responsible for filing all claims for any damages or loss incurred during transit.

Should your indicator come already installed on a scale, the following installation information does not apply to you.

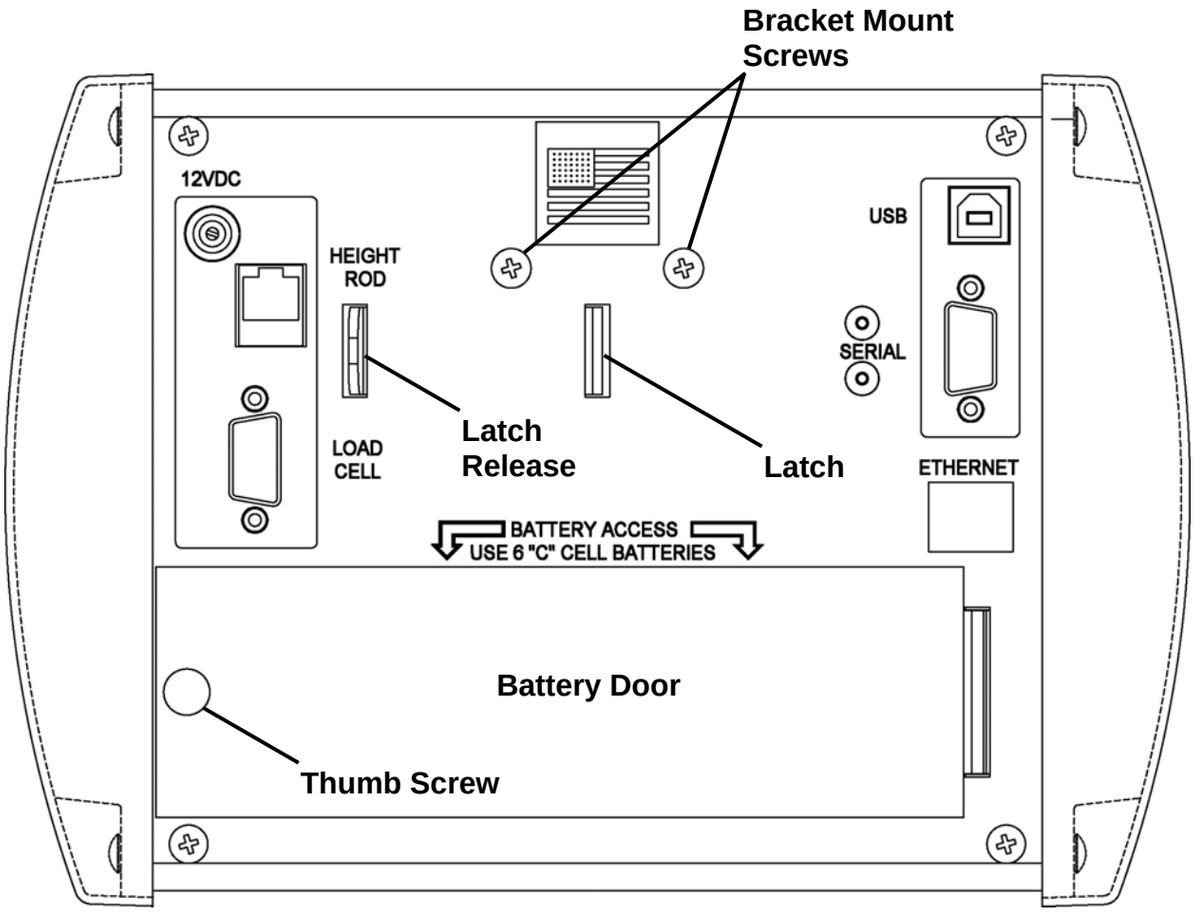


Figure No. 1

Mounting

The indicator may be mounted (using an optional bracket) to a desktop, table or bench. It can be mounted on a wall using the two (2) holes in the mounting bracket and two (2) #10 screws placed 2.00 inches apart in the wall.

To install indicator on bracket, push latch release down flush with back of indicator and hold. Next, place large end of slotted holes in bracket over screw heads on back of indicator. Pull down to secure indicator. Release latch release to lock indicator to bracket. See Figure No. 1.

Regardless of how and where you mount indicator, it should be in a safe area where it will not be in the way of normal traffic. The location chosen should be free of temperature extremes and water, is not subject to direct sunlight and should be mounted where the display is easily viewed and within easy reach of the operator.

If wall mounted, make certain structure and mounting bolts are of sufficient strength to support indicator. The mounting bracket should be securely fastened to wall so it cannot break loose.

INSTALLATION, CONT.

INTERCONNECTIONS

All input, output, options and power connections to the 758C are made at the rear panel of the indicator. Connections for the Load Cell input and the Serial I/0 are made using 9-pin "D" shaped connectors. The Height Rod option (Detecto DHR, Digital Height Rod) and Ethernet (758-IP) options use snap-in modular connectors. The USB I/O is an industry Standard-B type connector. The optional 12VDC AC adapter (wall plug-in UL/CSA listed power adapter) is connected using a power jack. Refer to Figure No. 1 for the layout of the rear panel.

Optional AC Power Adapter

To power the 758C using the optional 12V AC/DC wall plug-in adapter, connect the plug from the adapter into the power jack on the back of the indicator and then plug the power adapter into the proper electrical outlet. Refer to Figure No. 1. On models requiring 220 VAC, it is the customer's responsibility to obtain the correct power adapter plug.

Height Rod – Detecto DHR (Digital Height Rod) Option

The optional Detecto DHR (Digital Height Rod) connects to the 758C by a snap-in modular connector socket. Insert the modular connector of the DHR cable into the socket on the rear of the display it locks in place (a clicking sound will be heard when it is locked in place).

Load Cell

The load cell cable connects to the 758C via a 9-pin "D" connector on the rear panel of the indicator. Figure No. 2 shows the pin identification for the load cell connector. Make certain that the pins are correctly identified before soldering a wire to them. Use the connector retaining screws to hold the load cell cable connector securely to the rear panel.

PIN NO.	FUNCTION	PIN NO.	FUNCTION
1	+EXCITATION	6	-EXCITATION
2	-SIGNAL	7	+SIGNAL
3	No Connection	8	No Connection
4	No Connection	9	No Connection
5	SHIELD		

MATING CONNECTOR INFORMATION

DESCRIPTION	ITEM	Cardinal Part #
CONNECTOR	DE9-P	6610-2379
CONNECTOR SHELL	C883010001	6610-1131

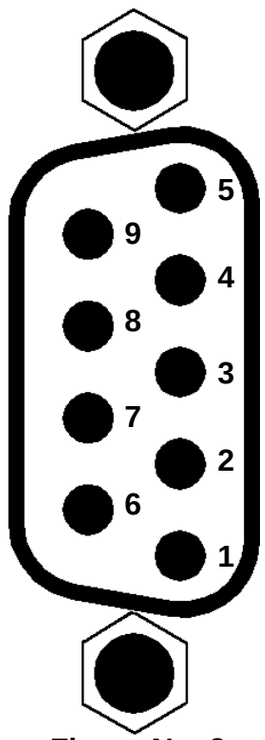


Figure No. 2

USB, Serial and Ethernet Interface Specifications

The 758C USB, Serial and Ethernet interface option can be configured during the setup and calibration procedure or during the setup review operation. Using either method, it is possible to select the operation of the interfaces.

The interfaces may be connected to a printer to record weight and associated data or they may be connected to a computer for transmission of weight data to a PC-based EMR (electronic medical record) software program. The weight data can be transmitted on demand (pressing the **PRINT/ENTER** key) or on receipt of a command from the computer.

USB Connector

The USB I/O is an industry Standard-B type connector and uses readily available cables.

INSTALLATION, CONT.

Serial I/O Port Connector

The 758C RS-232 serial I/O port is a 9-pin "D" connector on the rear panel of the indicator. Figure No. 3 shows the Serial I/0 connector along with the identity of the pins used. Make certain that the pins are correctly identified before soldering a wire to them. Use the connector retaining screws to hold the serial cable connector securely to the rear panel.

PIN NO.	FUNCTION
2	DATA INPUT (RXD)
3	DATA OUTPUT (TXD)
5	SIGNAL GROUND (GND)

Note that pins 1, 4 and 6 through 9 are not used.

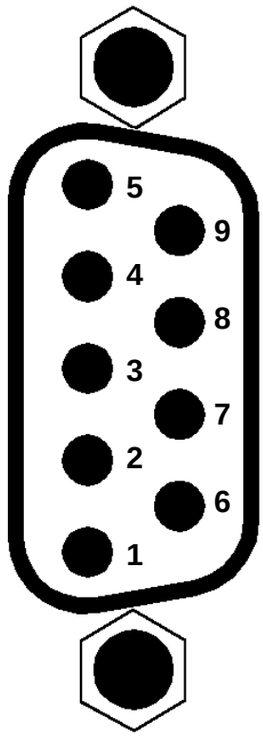


Figure No. 3

The 758C RS-232 serial interface can be configured during the setup and calibration procedure or during the setup review operation. Using either method, it is possible to select the operation of the serial interface as well as select the baud rate.

- The baud rates supported are: 1200, 2400, 4800, 9600, 19.2K and 38.4K baud.
- The data format is fixed at 8 bits, No parity, and 1 stop bit.
- The indicator is shipped from the factory with the baud rate set to 9600 baud.

Ethernet (Optional)

The 758C Ethernet option requires the purchase of the optional 758-IP Ethernet Interface Option. Once installed, connections to the 758C are by CAT 5 or equivalent cable. Consult your network administrator for the proper procedure to terminate and connect the cable.

BATTERIES

The indicator can use 6 "C" size Alkaline, Ni-Cad or NiMH batteries (*not included*). You must first obtain and install batteries before operations can begin. Batteries are contained in a battery holder inside indicator. Access is via a removable panel on back of indicator.

NOTE! The 758C can be operated from Alkaline, Ni-Cad or NiMH batteries. All six (6) batteries must be of the same type. They must all be Alkaline, all Ni-Cad or all NiMH. **DO NOT** mix Alkaline and Ni-Cad or NiMH batteries. In addition, the 758C does not have a battery charging circuit. Should you wish to use Ni-Cad or NiMH batteries, they must be fully charged before installing. When discharged, Ni-Cad or NiMH batteries must be removed and placed in an external charger to recharge.

A. To install batteries, turn indicator so that display is facing down (resting on keypad).
B. Locate rectangular panel on back of indicator and remove the thumb screw.
C. Remove panel (lift straight up and slide it out) exposing battery holder.
D. Install 6 "C" size batteries in holder, noting the polarity markings located in the battery holder. Refer to Figure No. 4.
E. After placing all 6 batteries in holder, replace panel on back of indicator (slide tab into slot on rear panel) and install thumb screw.
F. Make sure power supply is unplugged, and then turn indicator over (display facing up) and press **ON|OFF** key.
G. If display turns on, batteries have been installed correctly. If not, remove panel and check for one or more improperly positioned batteries

INSTALLATION, CONT.

BATTERIES, CONT.

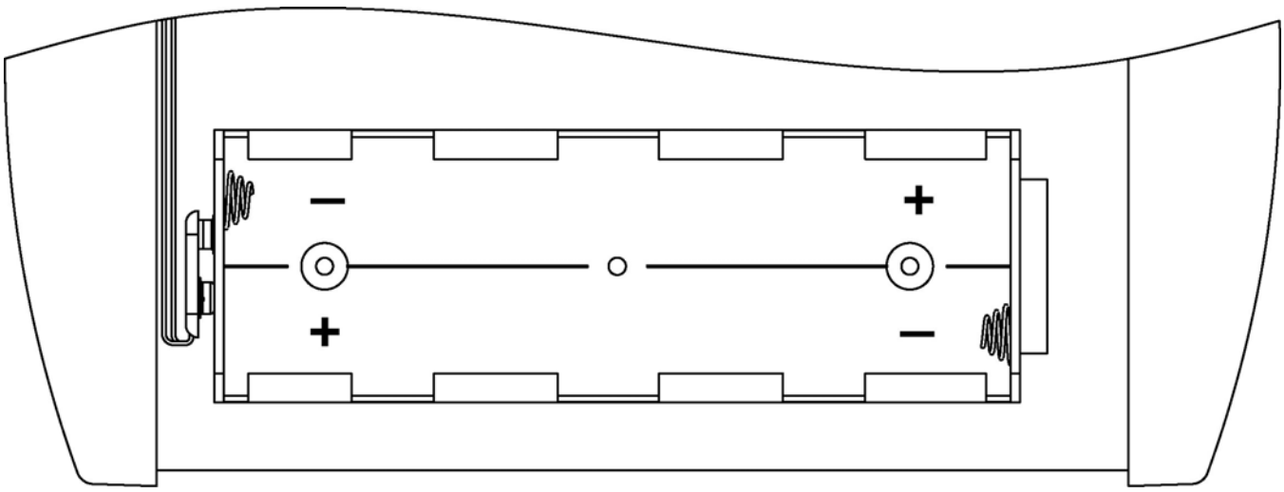


Figure No. 4

Battery Status

If batteries are used, the indicator will show battery status on power up. The display will show bAtEry then change to ≡ YY ≡, where YY indicates remaining battery voltage expressed as a percentage (%) of total battery voltage

Low Battery Indicator

When batteries are near the point they need to be replaced (Alkaline) or recharged (NiCad or NiMH), a low battery annunciator on display will turn on. (See Figure No. 5 or 6). If battery voltage drops too low for accurate weighing, the indicator will automatically shut off and you will be unable to turn it back on.

Using Alkaline Batteries

When the low battery annunciator turns on, turn indicator off, remove old batteries and replace with new ones.

Using NiCad or NiMH Batteries

When the low battery annunciator turns on, turn indicator off, remove discharged batteries and replace with fully charged ones and place discharged batteries in an external charger to recharge.

Follow same procedure for installing batteries when battery replacement becomes necessary.

KEYPAD FUNCTIONS

DO NOT operate the keypad with pointed objects (pencils, pens, etc). Damage to keypad resulting from this practice is NOT covered under warranty.

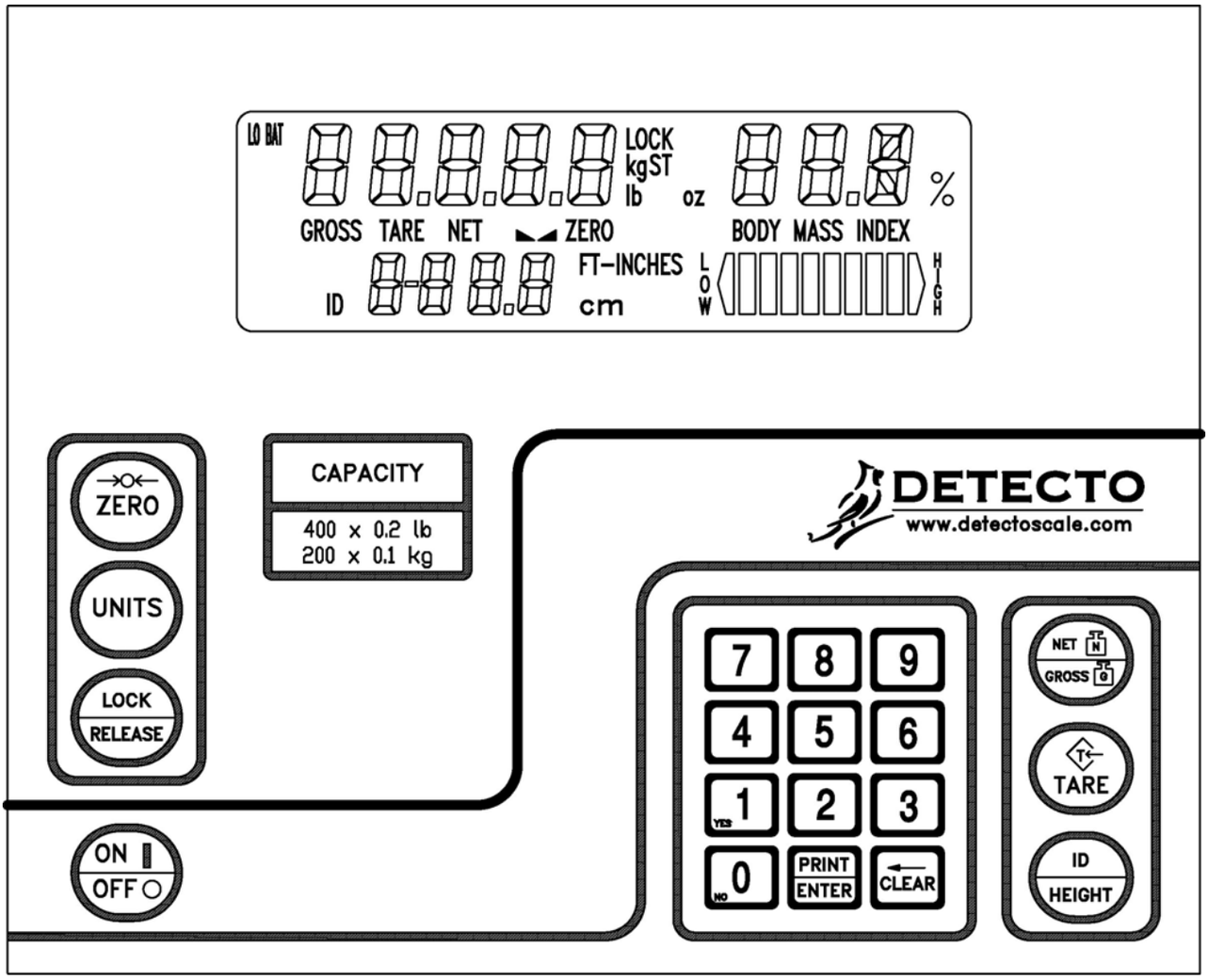


Figure No. 5

With indicator off, pressing this key will apply power to indicator and turn on display. If indicator is on, pressing this key again will display OFF and turn indicator off.

Basic Functions

This key is used to reset display to zero up to selected limit of either 4% or 100% of scale capacity. Zero limit is set during setup and calibration of indicator.

This key is used to change the weighing units to the alternate units of measurement. For example, with pounds displayed, pressing this key will change the weighting units to kilograms. **NOTE!** This feature must be enabled during setup and calibration for this key to be operational.

KEYPAD FUNCTIONS, CONT.

This key is used to lock and unlock the display. If the HOLD feature was enabled during setup and calibration, pressing this key (after obtaining a stable weight) will cause the indicator to lock onto the weight. Pressing this key again will unlock the display and return it to zero.

If AUTO LOCK feature was enabled, weight display will lock after placing a load on the scale and obtaining a stable weight. Pressing this key will unlock display and return it to zero, or if another load is applied, lock onto new weight after obtaining a stable weight. **NOTE!** The lock feature is for non-commercial (NOT "Legal for Trade") applications.

Body Mass Index (BMI) Functions

This key is used to toggle between Net and Gross weight modes. The selected mode is indicated by turning on an annunciator on the display. Note that if no valid tare weight has been entered, pressing this key will cause a momentary display -Err- and the indicator will remain in Gross weight mode.

This key is a dual function key. Pressing this key and then the **PRINT/ENTER** key (Pushbutton Tare) will store the current gross weight as the new tare weight and change the weight display to the net weight display mode. Pressing this key, entering a numeric value (Keypad Tare) and then pressing the **PRINT/ENTER** key will cause the value entered to be accepted as the new tare weight.

IMPORTANT! Tare weights equal to or greater than scale capacity cannot be entered. In addition, the keypad tare weight division value must be the same as the scale division value. For example, a unit with .05 lb as the division value will display -Err- if you attempt to enter 1.03 for the tare weight.

This key is used to display and enter an identification (ID) number and to enter the height (feet and inches or centimeters) for the Body Mass Index (BMI) calculation.

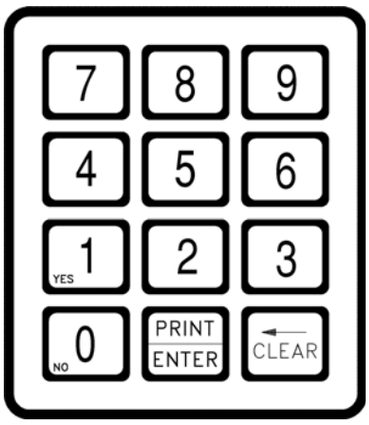
The identification (ID) number can be up to 11 digits. When entering an ID number, the digits start displaying on the right side of the ID display and proceed to the left. When an ID greater than 4 digits is used, the digits will automatically scroll off the left side of the display to show the additional digits on the right as they are entered.

The **CLEAR** key is used to clear an incorrect entry. If an incorrect entry is made, press the **CLEAR** key and re-enter the correct data. When entering an ID, pressing the **CLEAR** key will act as a “backspace” key (back up one space and delete the character in that space). **NOTE!** To ensure the data is not processed, the **CLEAR** key must be pressed before the **PRINT/ENTER** key.

KEYPAD FUNCTIONS, CONT.

The **PRINT/ENTER** key serves several purposes. First, during setup parameters, pressing it will display the current setting of the parameter. Second, it is used to signal completion of the data entry and causes the indicator to process the data entered. Third, it is used to during normal operation to send the weight and associated data to the serial printer.

NOTE! The indicator will not respond to pressing the **PRINT/ENTER** key unless the weight display is stable. If displaying gross weight, only the gross weight is printed. If displaying net weight, the gross, tare, and net weights are printed. If the ID and BMI features are used, their data is printed along with the weight data.



The **0** through **9** numeric keys are used to enter numeric data during the setup and calibration as well as during normal operation of the indicator.

NOTE! The **0** and **1** keys have dual functions. They are used to enter numeric data during setup and calibration as well as during normal operations and are also used to select yes or no to various prompts.

ANNUNCIATORS

The annunciators are turned on to indicate that the display is in the mode corresponding to the annunciator label or that the status indicated by the label is active.

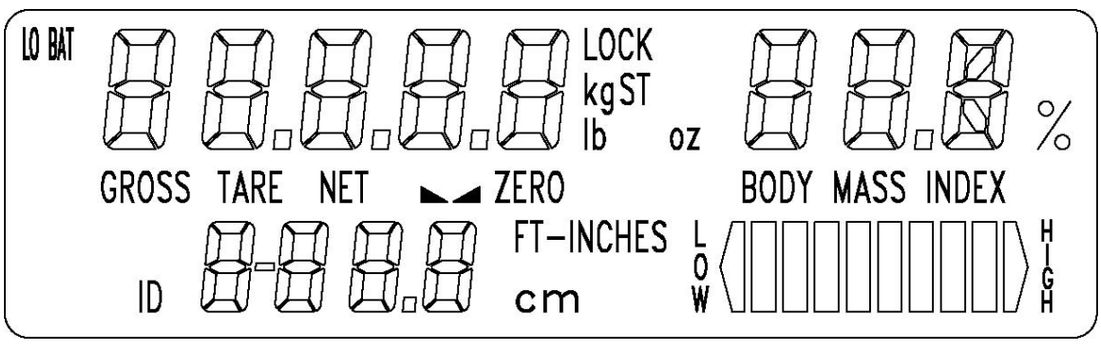


Figure No. 6

LO BAT
This annunciator will turn on to indicate the batteries need to be replaced soon. **NOTE!** When battery voltage drops to where operation is affected, the indicator will automatically turn off.

GROSS
This annunciator is turned on to show that gross weight is displayed. Gross weight will be displayed when no tare weight is stored.

TARE
This annunciator is turned on to show that a known tare (container) weight is stored.

ANNUNCIATORS, CONT.

NET
This annunciator is turned on to show that net weight is displayed. Net weight is determined by subtracting the stored tare weight (usually the empty container weight) from the gross weight. Note that the NET annunciator is only active when a tare weight is stored.

◣◢ (STABLE)
This annunciator is turned on when the weight display is stable. When off, it means that the change in successive weight samples is greater than the motion limits selected during setup.

ZERO
This annunciator is turned on to indicate that the weight displayed is within +/- 1/4 division of the center of zero.

LOCK
This annunciator is turned on to show that the indicator is locked onto the displayed weight. In operation, after obtaining a stable weight, pressing the **LOCK/RELEASE** key will cause the indicator to lock onto the weight and turn on the annunciator. Pressing the key again (or dropping below the Auto Lock reset value) will unlock the display and turn off the annunciator. **NOTE!** The lock feature must be enabled during setup.

kg
This annunciator is turned on to indicate that the displayed weight is in kilograms.

ST
This annunciator is turned on to indicate that the displayed weight is in Stones.

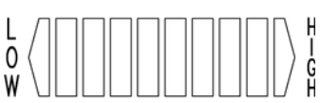
lb
This annunciator is turned on to indicate that the displayed weight is in pounds.

oz
This annunciator is turned on to indicate that the displayed weight is in ounces.

FT-INCHES
This annunciator is turned on when the displayed height measurement is in feet and inches.

cm
This annunciator is turned on when the displayed height measurement is in centimeters.

BODY MASS INDEX



The BODY MASS INDEX annunciator is turned on when displaying the calculated body fat. The bar graph is used to show a graphical representation (ranging from Low to High) of the Body Mass Index calculation.

OPERATION

Basic Operation

To Weigh

1. Press **ON/OFF** key to turn indicator on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb, oz, kg or ST annunciator will turn on to show that the scale is ready for use.
3. Place patient on scale and read weight display.
4. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket.
5. Remove patient from scale.

Zero Weight Display

1. In Gross Weight mode (GROSS annunciator on), press **ZERO** key.
2. Weight display will return to zero. ZERO and STABLE ◣◢ annunciators will turn on to show a stable, center-of-zero gross weight condition.

Metric Conversion

Press **UNITS** key to toggle between pounds and kilograms. Note that the lb or kg annunciator will turn on to show the weighing unit selected.

Push Button Tare (Tare weight is NOT known)

IMPORTANT! Tare entry is not allowed if Auto Hold is enabled.

1. In Gross Weight mode (GROSS annunciator on), place item (wheelchair, walker, etc…) to be tared on scale.
2. Press **TARE** key.
3. Display will show weight of item on scale and TARE annunciator will turn on.
4. Press **PRINT/ENTER** key.
5. Display will change to 0_0 and NET annunciator will turn on to show that net weight is being displayed. The item's weight has been entered as "tare weight".
6. Proceed with weighing operation.

Tare Weight Entry (Tare weight is known)

1. In Gross Weight mode (GROSS annunciator on), press **TARE** key.
2. Display will show zero or previously entered tare and TARE annunciator will turn on.
3. If weight displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, use the numeric keys and enter a new tare weight. Note that when entering tare weights, a maximum of 4 digits can be entered and the numbers advance from right to left in the display. The number of leading or trailing zeros required to obtain your desired tare is dependent upon the DIVISION VALUE selected in the setup procedure.

   For example:

Division Value:	0.01
Desired Tare Value:	1.50 lb
Key Sequence:	1 5 0

4. After the new tare weight has been entered, press **PRINT/ENTER** key.
5. Display will show a minus Net weight and NET annunciator will turn on.
6. Proceed with weighing operation.

Tare Weight Recall

1. In Net Weight mode (NET annunciator on), press **TARE** key.
2. Display will show previously entered tare for approximately 1 second and then return to Net Weight mode (NET annunciator on).

To Clear the Tare Weight

1. Press **NET/GROSS** key to return to Gross weight mode.
2. Remove all material from scale platform and press **ZERO** key. This will reset tare weight to zero.

OPERATION, CONT.

Basic Operation with ID – (No BMI, bm :=0)

To Weigh

1. Press **ON/OFF** key to turn indicator on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb, oz, kg or ST annunciator will turn on to show scale is ready for use.
3. Press **ID/HEIGHT** key.
4. Display will change to show id=.
5. Using numeric keys, key-in up to an 11 digit identification number.
6. Press **PRINT/ENTER** key.
7. Place patient on scale
8. Read weight display.
9. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket.
10. Remove patient from scale.

Push Button Tare (Tare weight is NOT known)

1. In Gross Weight mode (GROSS annunciator on), place item (wheelchair, walker, etc…) to be tared on scale.

IMPORTANT! Tare entry is not allowed if Auto Hold is enabled.

2. Press **TARE** key.
3. Display will show weight of item on scale and TARE annunciator will turn on.
4. Press **PRINT/ENTER** key.
5. Display will change to zero and NET annunciator will turn on to show that net weight is being displayed. The item's weight has been entered as "tare weight".
6. Press **ID/HEIGHT** key.
7. Display will change to show id=.
8. Using numeric keys, key-in up to an 11 digit identification number.
9. Press **PRINT/ENTER** key.
10. Proceed with weighing operation.

Tare Weight Entry (Tare weight is known)

1. In Gross Weight mode (GROSS annunciator on), press **TARE** key.
2. Display will show 0.0 or previously entered tare and TARE annunciator will turn on.
3. If weight displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, use the numeric keys and enter a new tare weight. Note that when entering tare weights, a maximum of 4 digits can be entered and the numbers advance from right to left in the display. The number of leading or trailing zeros required to obtain your desired tare is dependent upon the DIVISION VALUE selected in the setup procedure.

For example:	Division Value:	0.01
	Desired Tare Value:	1.50 lb
	Key Sequence:	1 5 0

1. After the new tare weight has been entered, press **PRINT/ENTER** key.
2. Display will show a minus Net weight and NET annunciator will turn on.
3. Press **ID/HEIGHT** key.
4. Display will change to show id=.
5. Using numeric keys, key-in up to an 11 digit identification number.
6. Press **PRINT/ENTER** key.
7. Proceed with weighing operation.

OPERATION, CONT.

Body Mass Index (BMI) Operation – (No ID, id:0)

To Weigh and Calculate BMI with Mechanical Height Rod or No Digital Height Rod

1. Press **ON/OFF** key to turn indicator on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb, oz, kg or ST annunciator will turn on to show scale is ready for use.
3. Perform tare operation if required. Refer to Push Button Tare or Tare Weight Entry in previous section for instructions on using tare.
4. Place patient on the scale and then press **ID/HEIGHT** key.
5. If Feet-Inches were selected in setup for height measurement, display will change to show FEEt:.
    a. Using numeric keys, enter 1 digit for height in feet and then press **PRINT/ENTER** key.
    b. Display will change to show inCH:.
    c. Using numeric keys enter up to 3 digits (# # . #) for height in inches and then press **PRINT/ENTER** key or press **PRINT/ENTER** key if no inches are required.
6. If Centimeters was selected in setup for height measurement, display will change to show Cm:.
    a. Using numeric keys enter up to 4 digits (# # # . #) for height in centimeters and then press **PRINT/ENTER** key.
7. Read weight and BMI displays.
8. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket.
9. Remove patient from scale.
10. BMI display will clear when weight returns to zero.

OPERATION, CONT.

Body Mass Index (BMI) Operation – (No ID, id:0)

To Weigh and Calculate BMI with Digital Height Rod

1. Press **ON/OFF** key to turn indicator on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb, oz, kg or ST annunciator will turn on to show scale is ready for use.
3. Perform tare operation if required. Refer to Push Button Tare or Tare Weight Entry in previous section for instructions on using tare.
4. Make sure the height rod is in the starting position. Note that the starting position is with the inner sliding tube completely down inside the outer stationary tube and the headpiece folded flat against the stationary tube.
5. Place patient on the scale.
6. Grasp height rod at hinge pin (see Figure No. 7) and raise it well above patient's head and then lift headpiece to horizontal position.
7. Carefully lower height rod until headpiece rests on top of patient's head.

Figure No. 7

IMPORTANT! If the height displayed is 999.9, return the height rod to its "starting position" and repeat steps 6 and 7.

8. BMI will automatically be displayed with height.
9. Read weight, height and BMI displays.
10. While holding headpiece horizontal, raise height rod well above patient's head.
11. Remove patient from scale.
12. Return height rod to starting position.
13. BMI display will clear when weight returns to zero.

OPERATION, CONT.

Body Mass Index (BMI) Operation with ID

To Weigh and Calculate BMI with Mechanical Height Rod or No Digital Height Rod

1. Press **ON/OFF** key to turn indicator on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb, oz, kg or ST annunciator will turn on to show scale is ready for use.
3. Press **ID/HEIGHT** key.
4. Display will change to show id:.
5. Using numeric keys, key-in up to an 11 digit identification number.
6. Press **PRINT/ENTER** key.
7. Place patient on scale.
8. Press **ID/HEIGHT** key.
9. If Feet-Inches were selected in setup for height measurement, display will change to show FEEt:.
    a. Using numeric keys, enter 1 digit for height in feet and then press **PRINT/ENTER** key.
    b. Display will change to show inCH:.
    c. Using numeric keys enter up to 3 digits (# # . #) for height in inches and then press **PRINT/ENTER** key or press **PRINT/ENTER** key if no inches are required.
10. If Centimeters was selected in setup for height measurement, display will change to show Cm:_.
    a. Using numeric keys enter up to 4 digits (# # # . #) for height in centimeters and then press **PRINT/ENTER** key.
11. Read weight and BMI displays.
12. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket.
13. Remove patient from scale.
14. Press **NET/GROSS** key to return to Gross weight mode.
15. Press **ZERO** key. This will reset tare weight to zero.
16. BMI display and ID will clear when weight returns to zero.

OPERATION, CONT.

Body Mass Index (BMI) Operation with ID

To Weigh and Calculate BMI <u>with</u> Digital Height Rod

1. Press **ON/OFF** key to turn indicator on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb, oz, kg or ST annunciator will turn on to show scale is ready for use.
3. Press **ID/HEIGHT** key.
4. Display will change to show id:.
5. Using numeric keys, key-in up to an 11 digit identification number.
6. Press **PRINT/ENTER** key.
7. Place patient on scale.
8. Grasp height rod at hinge pin (see Figure No. 8) and raise it well above patient's head and then lift headpiece to horizontal position.
9. Carefully lower height rod until headpiece rests on top of patient's head.

IMPORTANT! If the height displayed is 999.9, return the height rod to its "starting position" and repeat steps 8 and 9.

Figure No. 8

10. BMI will automatically be displayed with height.
11. Read weight, height and BMI displays.
12. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket.
13. While holding headpiece horizontal, raise height rod well above patient's head.
14. Remove patient from scale.
15. Return height rod to starting position.
16. Press **NET/GROSS** key to return to Gross weight mode.
17. Press **ZERO** key. This will reset tare weight to zero.
18. BMI display and ID will clear when weight returns to zero.

SETUP AND CALIBRATION

Your 758C Indicator has been thoroughly tested and calibrated before being shipped to you. If you received the indicator with a scale, calibration is not necessary. If the indicator is being connected to a scale for the first time or recalibration is necessary for other reasons, proceed as indicated.

Calibration and Setup of the indicator is accomplished entirely by the keypad and does not require removing a calibration jumper or pressing a calibration switch.

During the setup and calibration process it is necessary to enter operational parameters via the indicator's keypad. The following keys and the numeric keypad are used to input the values.

PRINT/ENTER

NO

YES

- Pressing the **PRINT/ENTER** key <u>without</u> entering a new value will retain the current setting and advance to the next prompt.
- Some prompts require only a YES or NO selection.
- Other prompts require a numeric value to be entered. Use the numeric keypad to enter the new value.
- In either case, pressing the **PRINT/ENTER** key after changing a setting will save the new value and advance to the next prompt.

CAUTION! The membrane keypad is not to be operated with pointed objects (pencils, pens, fingernails, etc). Damage to keypad resulting from this practice will NOT be covered under warranty.

To Begin Setup And Calibration:

1. With the power off, press and hold the **LOCK/RELEASE** key and then press the **ON/OFF** key.
2. The indicator will perform a display test (turn on all digits), show the software version for a few seconds and then change to show SEtUP.
3. Release the **LOCK/RELEASE** key.
4. The display will change to show int=.
5. The indicator is now ready for setup and calibration.

LOCK/RELEASE

ON/OFF

int= (INTERVAL SETTING)

Press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are 1, 2, 5 or 10.

NOTE! If you select an interval value of 10 (int= 10), dPP= prompt <u>will</u> <u>not</u> be shown. Setup will proceed to CAP=, scale capacity setting prompt.

SETUP AND CALIBRATION, CONT.

Unit: (WEIGHING UNIT)

With display showing Unit:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key again to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are:

0 = None	3 = Pounds/Kilograms	6 = Grams Only
1 = Pounds Only	4 = Kilograms/Pounds	7 = Stones and Pounds or Kilograms
2 = Kilograms Only	5 = Ounces Only	

IMPORTANT! If Unit:7 (7 = Stones and Pounds or Kilograms) is selected, the value selected for int: (Scale Interval) and dPP: (Decimal Point Position) must be set to (1).

NOTE! Weight display for Stones and Pounds/Kilograms mode is XX.YY.Y, where XX is weight in Stones and YY.Y is remainder of the weight in pounds. Please note that in this mode, "ST" and "lb" annunciators will be turned on.

dPP: (DECIMAL POINT POSITION)

With display showing dPP:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are:

0 = XXXXXX 1= XXXXX**.**X 2 = XXXX**.**XX 3 = XXX**.**XXX

CAP: (SCALE CAPACITY)

With display showing CAP:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are 1 through 99,999.

CAL: (CALIBRATION)

With display showing CAL:, press **PRINT/ENTER** key. Display will change to show current setting 0 (0=NO). If scale has been previously calibrated and you wish to skip calibration and proceed to trA:, Zero Tracking Range, simply press **PRINT/ENTER** key and internal calibration factor will be retained.

To begin calibration, press **1/YES** key to select yes and then press **PRINT/ENTER** key. After pressing **PRINT/ENTER** key display will change to LOAd:.

SETUP AND CALIBRATION, CONT.

LOAd: (LOAD CALIBRATION WEIGHT)

Display will change to LOAd: which is a prompt for entry of calibration weight value and placement of this amount of test weights on scale platform.

1. Make certain scale platform is empty and free of debris.
2. Place the desired amount of calibrated test weights on scale platform. A minimum of 50% of scale's capacity is required. However 70% to 100% is recommended.
3. Press **PRINT/ENTER** key.
4. If the value displayed is acceptable, press the **PRINT/ENTER** key again. Otherwise, determine the exact amount of test weights to be placed on scale platform, then using numeric keys, enter this value.
5. Verify that the numbers entered are the same as the amount of test weights and then press the **PRINT/ENTER** key.
6. Starting at the left and proceeding right, a series of dashes will appear on the display. The dashes will stay on the display momentarily, then disappear, after which the display will proceed to the next prompt.

UnLOd: (UNLOAD CALIBRATION WEIGHT)

After a moment, the display will change to unLOd.

1. Remove the weights from the scale platform and then press the **PRINT/ENTER** key.
2. Starting at the left and preceding right, a series of dashes will appear on the display. The dashes will stay on the display momentarily, then disappear, after which the calibration factor will be saved and the display will proceed to the next prompt.

trA: (ZERO TRACKING RANGE)

Zero tracking range is a value in scale divisions that will be automatically zeroed off. With the display showing trA:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are 1 through 18 (1 to 9 divisions by 0.5 divisions). Enter a 0 (zero) to disable zero tracking.

trL: (FOUR PERCENT ZERO TRACKING RANGE LIMIT)

This setting determines whether a 4% limit is placed on zero tracking and push button zero and selects the format when printing the date.

If enabled, (trL: 1) zero tracking and push button zero is limited to 4 % of scale capacity and the date format is dd/mm/yy.

If disabled, (trL: 0) zero tracking and push button zero will operate up to full scale capacity and the date format is mm/dd/yy.

With display showing trL:, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press the **PRINT/ENTER** key to save it. Otherwise use numeric keys **0/NO** or **1/YES** and enter a new setting. Press **PRINT/ENTER** key to save it.

UnS: (UNSTABLE RANGE)

The Unstable Range is the number of divisions of change permitted before the STABLE annunciator turns off.

With display showing UnS:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are 1 through 9.

SETUP AND CALIBRATION, CONT.

FLt= (DIGITAL FILTER LEVEL SELECTION)

Display will change to show FLt= (prompt for selection of digital filtering level). Your indicator will arrive with factory filter settings (1 = minimal) entered. Please check with your scale service technician should you wish to change filter level and break range.

Press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are 0, 1, 2 or 3. Note, that if you select 3 (Custom Filtering) two additional prompts will be displayed.

0 = Disabled – NO Filtering	2 = MODERATE FILTERING
1 = MINIMAL FILTERING	3 = CUSTOM FILTERING

NOTE! The prompts, F= (Filter Level) and br= (Break Range) will only be displayed if you select 3 (Custom Filtering) for the FLt= Digital Filter Level.

F= (FILTER LEVEL)

With Custom Filtering selected, the display will change to show FL= (Filter Level). Filter level is a number from 1 (least) to 16 (greatest) that corresponds to the amount of filtering.

Press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are 1 through 16.

br= (BREAK RANGE)

The Break Range is a number from 1 to 64 that corresponds to the number of division changes to break out of filtering.

With display showing br=, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are 1 through 64.

Sr= (SAMPLE RATE)

With display showing Sr=, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. The sample rate may be set from a minimum of 1 sample per second to a maximum of 10 samples per second in one sample per second intervals. Allowable values are 1 through 10.

SETUP AND CALIBRATION, CONT.

HOLd: (HOLD MODE)

With display showing HOLd:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are:

0 = NO (disable) 1 = YES (enable) 2 = AUTO (Automatic Hold)

- If HOLd:0 or 1 (NO or YES) is selected, proceed to n in: (Minutes) section.
- If HOLd: 2 (AUTO) is selected, an additional prompt bAnd: (Auto Lock Reset Band) will be displayed. Proceed to bAnd: (Auto Lock Reset Band) to continue setup.

With Hold feature enabled (HOLd: 1), the indicator will lock the displayed weight on the display when **LOCK/RELEASE** key is pressed. Pressing the key again will unlock display. If automatic hold (HOLd:2) is selected, the indicator will automatically lock the weight on the display after obtaining a stable weight value that exceeds the Auto Lock Reset Band value. Refer to the next prompt Auto Lock Reset Band.

NOTE! HOLD mode of operation is only used in non-commercial applications and must be set to 0 = NO (disabled) for "Legal for Trade" applications.

bAnd: (AUTO LOCK RESET BAND)

If Automatic Lock is selected, display will change to show bAnd: (Auto Lock Reset Band value). This is the number of division changes needed to reset the auto lock. For Automatic Lock to function, load on scale must rise above bAnd: value (and remain stable). To release Automatic Lock, load on scale must fall below bAnd: value. At that point, next weighing operation can begin.

Press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are: 0 through 99.

n in: (MINUTES)

With display showing n in:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are: 0 through 59.

HH: (HOURS)

With display showing hh:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are: 0 through 23.

NOTE! Time is entered in a 24-hour format. When entering times after noon (12:00 PM), you must add 12 to time. For example, 3:00 PM would be entered as 15.

SETUP AND CALIBRATION, CONT.

dd: (DAY)

With display showing dd:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are: 1 through 31.

mn: (MONTH)

With display showing mn:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are: 1 through 12.

YY: (YEAR)

With display showing YY:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are: 00 through 99.

id: (ID NUMBER FEATURE)

This setting determines whether the indicator allows an ID number to be entered prior to beginning the weighing operation. This applies to both Basic Operation and with BMI feature enabled.

With display showing id:, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise use numeric keys **0/NO** or **1/YES** and enter a new setting. Press **PRINT/ENTER** key to save it.

0 = ID Disabled 1 = ID Enabled

Htr: (DIGITAL HEIGHT ROD)

This setting determines whether the height rod port is enabled for the Detecto DHR (Digital Height Rod). With the port enable and the height rod connected, the BMI will automatically be calculated and displayed when the height rod is raised and placed on the patient's head.

With display showing Htr:, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise use numeric keys **0/NO** or **1/YES** and enter a new setting. Press **PRINT/ENTER** key to save it.

0 = Height Rod Port is Disabled 1 = Height Rod Port is Enabled

bmi: (BMI CALCULATION FEATURE)

This setting determines whether the indicator operates as a basic (weigh calculation only) indicator or performs the Body Mass Index (BMI) calculation.

With display showing bmi:, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise use numeric keys **0/NO** or **1/YES** and enter a new setting. Press **PRINT/ENTER** key to save it.

0 = BMI Disabled 1 = BMI Enabled

SETUP AND CALIBRATION, CONT.

P220: (P220 PRINTER)

This setting determines whether weight data sent to the serial port is formatted for a P220 printer or the Carriage Return Line Feed (CRLF) option used by the P185 printer.

With display showing P220:, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise, using numeric keys 0**/NO** or **1/YES**, enter a new setting, then press **PRINT/ENTER** key to save it.

0 = P220 Serial Format is Disabled and CRLF is Enabled

1 = P220 Serial Format is Enabled

NOTE! If you enable P220 Serial Format (P220: 1), the display will skip to the bAUd: prompt.

CrLF: (CARRIAGE RETURN LINE FEED OPTION)

This setting determines whether weight data sent to the serial port is formatted for a P185 printer in Journal mode or Ticket mode. **NOTE!** If you select Ticket Mode, an additional prompt (EOP:) will be displayed.

With display showing CrLF:, press the **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise use numeric keys **0/NO** or **1/YES** and enter a new setting. Press **PRINT/ENTER** key to save it.

0 = Set Serial Format for P185 Printer Journal Mode

1 = Set Serial Format for P185 Printer Ticket Mode

EOP: (END OF PRINT LINEFEEDS)

At the end of data sent to a printer, the indicator can send a number of line feed commands to space the paper in the printer to a desired position for withdrawal or for the next print. **NOTE!** This prompt will only be displayed if you select P220:0 and CrLF: 1.

With display showing EoP:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are: 00 through 99.

bAUd: (SERIAL OUTPUT BAUD RATE)

With display showing bAUd:, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are: 0, 1, 2, 3, 4 or 5.

0 = 1200 Baud	1 = 2400 Baud	2 = 4800 Baud
3 = 9600 Baud	4 = 19.2k Baud	5 = 38.4k Baud

PPOrt (PRINTER PORT)

With display showing PPOrt, press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are:

1 = Serial Port 2 = Ethernet (requires 758-IP option) 3 = USB Port

SETUP AND CALIBRATION, CONT.

Cont 1 (CONTINUOUS OUTPUT SERIAL PORT)

With display showing Cont 1, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise use numeric keys **0/NO** or **1/YES** and enter a new setting. Press **PRINT/ENTER** key to save it.

0 = Serial Port Continuous Output is Disabled

1 = Serial Port Continuous Output is Enabled

Cont2 (CONTINOUS OUTPUT ETHERNET PORT)

With display showing Cont2, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise use numeric keys **0/NO** or **1/YES** and enter a new setting. Press **PRINT/ENTER** key to save it.

0 = Ethernet Port Continuous Output is Disabled

1 = Ethernet Port Continuous Output is Enabled

Cont3 (CONTINOUS OUTPUT USB PORT)

With display showing Cont3, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise use numeric keys **0/NO** or **1/YES** and enter a new setting. Press **PRINT/ENTER** key to save it.

0 = USB Port Continuous Output is Disabled

1 = USB Port Continuous Output is Enable

btn: (BUTTON OPERATION)

This setting determines which keys (**NET/GROSS**, **TARE**, and/or **ID/HEIGHT**) are locked out during normal operation.

Press **PRINT/ENTER** key to show current setting. If value displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise using numeric keys, enter a new value and then press **PRINT/ENTER** key to save it. Allowable values are 0, 1, 2 or 3.

0 = No Keys Disabled

1 = NET/GROSS and TARE Keys Disabled

2 = ID/HEIGHT Keys Disabled

3 = NET/GROSS, TARE, and ID/HEIGHT Keys Disabled

FEEt: (HEIGHT MEASUREMENT MODE)

This setting determines whether centimeters or feet-inches will be used for height measurement when performing BMI calculations.

With display showing FEEt:, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise use numeric keys **0/NO** or **1/YES** and enter a new setting. Press **PRINT/ENTER** key to save it.

0 = Centimeters

1 = Feet-Inches

SETUP AND CALIBRATION, CONT.

n iCAd (BATTERY TYPE SELECTION)

This setting determines whether Alkaline, NiCad (or NiMH) batteries are used for battery operation.

With display showing n iCAd:, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise use numeric keys **0/NO** or **1/YES** and enter a new setting. Press **PRINT/ENTER** key to save it.

0 = Alkaline 1 = NiCad or NiMH

PUO: (POWER UP ZERO)

With display showing PUO:, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise use numeric keys **0/NO** or **1/YES** and enter a new setting. Press **PRINT/ENTER** key to save it and proceed to the next prompt. Allowable values are 0 or 1.

1=YES – Weight display will be reset to zero automatically on power up.

0=NO – Weight display will not be reset to zero.

ASH: (AUTOMATIC SHUTOFF)

The Automatic Shutoff feature will turn the indicator off after a period of approximately 1 to 9 minutes of inactivity to prolong battery life. You must press **ON/OFF** key to turn indicator back on.

With display showing ASH:, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise use numeric keys to enter a new setting and then press **PRINT/ENTER** key to save it. Allowable values are 0 through 9 with 0 disabling Automatic Shutoff.

SLP: (SLEEP MODE)

The Sleep Mode feature also conserves battery power when the indicator remains unused for a period of approximately 1 to 9 minutes. When enabled, the load cell excitation will be reduced and the display will show SLEEP. The Sleep feature requires the indicator to remain at the center of zero to activate, unlike Automatic Shutoff feature which only requires no motion. Weight placed on scale will activate indicator and return it to weight mode.

With display showing SLP:, press **PRINT/ENTER** key to show current setting. If setting displayed is acceptable, press **PRINT/ENTER** key to save it. Otherwise using numeric keys, enter a new setting and then press **PRINT/ENTER** key to save it. Allowable values are 0 through 9 with 0 disabling Sleep Mode

Setup And Calibration Is Complete

The setup and calibration process has been completed. The indicator will reset and then display weight. The indicator is now ready for normal operation.

SETUP REVIEW

The 758C indicator allows several operational parameters to be reviewed and changed as necessary without having to enter the setup mode.

To Enter Setup Review

1. If indicator is on, press the **ON/OFF** key.
2. Press and hold the **ZERO** key and then press the **ON/OFF** key.
3. The indicator will perform a display test (turn on all digits), show the software version for a few seconds and then change to show ru.E11.
4. Release the **ZERO** key.
5. Display will change to mn: (prompt to set minute's portion of time).
6. Refer to instructions listed in Setup and Calibration section of manual for information on how to change these parameters.

Parameters in Setup Review will be processed in the following sequence:

- mn: Set the minutes portion of the time
- HH: Set the hours portion of the time
- dd: Set the day of the month
- mm: Set the month of the year
- YY: Set the year
- Id: Enable or Disable ID number input feature
- Htr: Enable or Disable Digital Height Rod Port
- bmi Enable or Disable BMI calculation feature
- P220: Enable P220 serial format and Disable CRLF or Disable P220 serial format and Enable CRLF
- CrLF: Set serial format for P185 Journal Mode or for P185 Ticket Mode
- EoP: Set Number of End Of Print linefeeds printed
- bAUd: Select baud rate for serial output
- PPort Select Serial or Ethernet or USB port for Printer Port
- Cont1 Enable or Disable Serial Port Continuous Output
- Cont2 Enable or Disable Ethernet Port Continuous Output
- Cont3 Enable or Disable USB Port Continuous Output
- btn: Enable or Disable **NET/GROSS**, **TARE** and/or **ID/HEIGHT** keys
- FEEt: Select Centimeters or Feet-Inches for BMI height measurement
- niCAd Select to use Ni-Cad (NiMH) or Alkaline batteries
- PU0: Enable or Disable automatic reset of weight display to zero on power up
- ASH: Disable or select number of minutes for automatic shutoff timer
- SLP: Disable or select number of minutes of inactivity at zero for sleep mode

SERIAL DATA FORMATS

P220 Ticket

If the P220 Ticket printer was selected, P220:1 (1 = Enable P220 Serial Format) during setup and calibration of the indicator, the data will be transmitted in the following format:

Time, mm/dd/yy

ID: xxxxxxxxxxx
BMI: xx.x
Height: x' xx.x" or xx.x cm
Weight: xxx.xuu G
xxx.xuu T
xxx.xuu N

NOTE! When the P220 printer is enabled, every time the indicator is powered on, it will print a test ticket making sure the P220 printer is in the correct mode of operation.

If the printer is in the correct mode the ticket will look like:

OEPL1

Cardinal Scale Mfg

Test Label

If the printer is not in the correct mode, the ticket will look like:

Cardinal Scale Mfg

Test Label

IMPORTANT! After printing the test ticket, the printer will switch to the correct mode.

P185 Journal Mode

If the P220 Ticket printer was not selected, P220:0 (0 = P220 Serial Format is Disabled and CRLF is Enabled) *AND* CrLF:0 (0 = Set Serial Format for P185 Journal Mode) during setup and calibration of the indicator, the data will be transmitted in the following format:

Time, Date, ID, BMI, Height, Weight <CR><LF>

P185 Ticket Mode

If the P220 Ticket printer was not selected, P220:0 (0 = P220 Serial Format is Disabled and CRLF is Enabled) *AND* CrLF:1 (1 = Set Serial Format for P185 Ticket Mode) during setup and calibration of the indicator, the data will be transmitted in the following format:

Time, mm/dd/yy

ID: xxxxxxxxxxx
BMI: xx.x
Height: x' xx.x" or xx.x cm
Weight: xxx.xuu G
xxx.xuu T
xxx.xuu N

IMPORTANT! The P185 printer (both modes) doesn't print a test ticket on power-up.

If ID or BMI are disabled, the appropriate field will be left out on any three formats.

SERIAL DATA FORMATS, CONT.

SMA Weight On Demand

If a printer is not used and the indicator is connected to a computer for transmission of weight data to a PC-based EMR (electronic medical record) software program, it will transmit a single set of weight data each time the computer sends an SMA weight request (“W” or “W01”). This is known as Weight-On-Demand. Examples and explanation of the data format transmitted are shown below.

SMA Standard Format

The host device (computer) sends:

<lf> W <cr>

The 758C will respond:

<lf><s><r><n><m><f><xxxxxx.xxx><uuu><cr>

Where:

lf =	Line Feed	
s =	Flags	Z= center of Zero, O = Overcap, E = zero Error, e = weight not currently being displayed
r =	Range	1, 2, 3, ...
n =	Mode	G = Gross, T = Tare, N = Net
M =	Motion	M = Motion, " "(*blank*) = no motion
f =	Custom	Custom flag
xxxxxx.xxx =	Weight	Six digits with decimal point
uuu =	Units	None, lb, kg, oz, g, st
Cr =	Carriage Return	(hex 0D)

SMA Alternate Format

The host device (computer) sends:

W01 <cr>

The 758C will respond:

<lf>W01,<s><r><n><m><f><xxxxxx.xxx><uuu><cr>

Where:

lf =	Line Feed	
W01	W01	The text “W01”
,	Comma	(hex 2C)
s =	Flags	Z= center of Zero, O = Overcap, E = zero Error, e = weight not currently being displayed
r =	Range	1, 2, 3, ...
n =	Mode	G = Gross, T = Tare, N = Net
M =	Motion	M = Motion, " "(*blank*) = no motion
f =	Custom	Custom flag
xxxxxx.xxx =	Weight	Six digits with decimal point
uuu =	Units	None, lb, kg, oz, g, st
Cr =	Carriage Return	(hex 0D)

INPUT COMMANDS

The serial, USB and optional Ethernet ports on the 758C are bi-directional ports and can both receive and transmit data. It is possible to control the printing operation of the 758C by transmitting commands to the indicator using these ports.

Remote Print Command

The host device (computer) sends:

<lf> P <cr>

The 758C will respond by printing a ticket using the port selected in Setup and Calibration (refer to the PPOrt parameter). This command is equivalent to pressing the **PRINT** key on the 758C keypad. The ticket will be printed in the following format:

Time, mm/dd/yy

ID:	xxxxxxxxxxx
BMI:	xx.x
Height:	x' xx.x" or xx.x cm
Weight:	xxx.xuu G
	xxx.xuu T
	xxx.xuu N

Journal Mode Print Command

The host device (computer) sends:

<lf> J <cr>

The 758C will respond by printing a ticket using the port selected in Setup and Calibration (refer to the PPOrt parameter). The ticket will be printed in the following format:

Time, Date, ID, BMI, Height, Weight <CR><LF>

This command is equivalent to pressing the **PRINT** key on the 758C keypad with the P220 Serial Format Disabled and CRLF Enabled (P220=0), and the CRLF set for Serial Format for P185 Journal Mode (CrLF=0) parameters selected. Note that this command will print a ticket in the above format regardless of how the P220 and CrLF parameters are set.

NOTE! If ID or BMI are disabled, the appropriate field will be left out on the ticket printed.

ERROR AND STATUS DISPLAYS

Display	Meaning
-Err-	General error, invalid keypad entry was attempted.
-OF-	Attempting to display a negative number greater than –9,999 or a positive number greater than 99,999
-trL-	Indicates an attempt to zero a weight outside scale zero range. (See Four Percent Zero Tracking Range Limit).
-UnS-	Motion is present when indicator is attempting to perform one of the following operations: Power Up Zero or Zero Weight Display
CAL ib	Indicates calibration is necessary.
AdErr	Consult your scale service representative.
ErrA	
ErrAL	
ErrAH	
EE Err	
OCAP	Scale weight exceeds scale capacity

BEFORE YOU CALL FOR SERVICE

Problem	Possible Solutions
Display does not turn on	AC Operation: • Is AC power supply fully inserted into wall receptacle? • Check wall receptacle for proper AC power. Try another electrical appliance in same receptacle, does it work? • Check circuit breaker. • Has there been power failure? Battery operation: • Check if batteries are installed and correctly. • Are batteries discharged? If Alkaline, remove old batteries and replace with new ones. If NI-CAD or NiMH, remove discharged batteries and replace with fully charged ones or place discharged batteries in an external charger to recharge.
Incorrect weight displayed	Insure that scale platform isn't touching an adjacent object. Have proper operation procedures been followed?
Indicator will not display weight	Refer to Error and Status Display section and make certain that the 0 CAP message is not displayed. If so, and scale is not loaded, perform the calibration sequence.

EVENT COUNTER

The 758C weight indicating instrument has been designed with an Event Counter type of security seal. When selected, the 758C will display two 3-digit numbers representing the Calibration and Configuration counters.

Calibration Counter

The calibration counter is incremented when a value in the calibration part of setup is changed (USA, int, Unit, trA, UnS, dPP, CAP, FLt, F, br, Sr, CAL, SEtGC, CALGC, OPGC). The counter is only incremented 1 time even if more than one parameter is changed each time through setup.

Configuration Counter

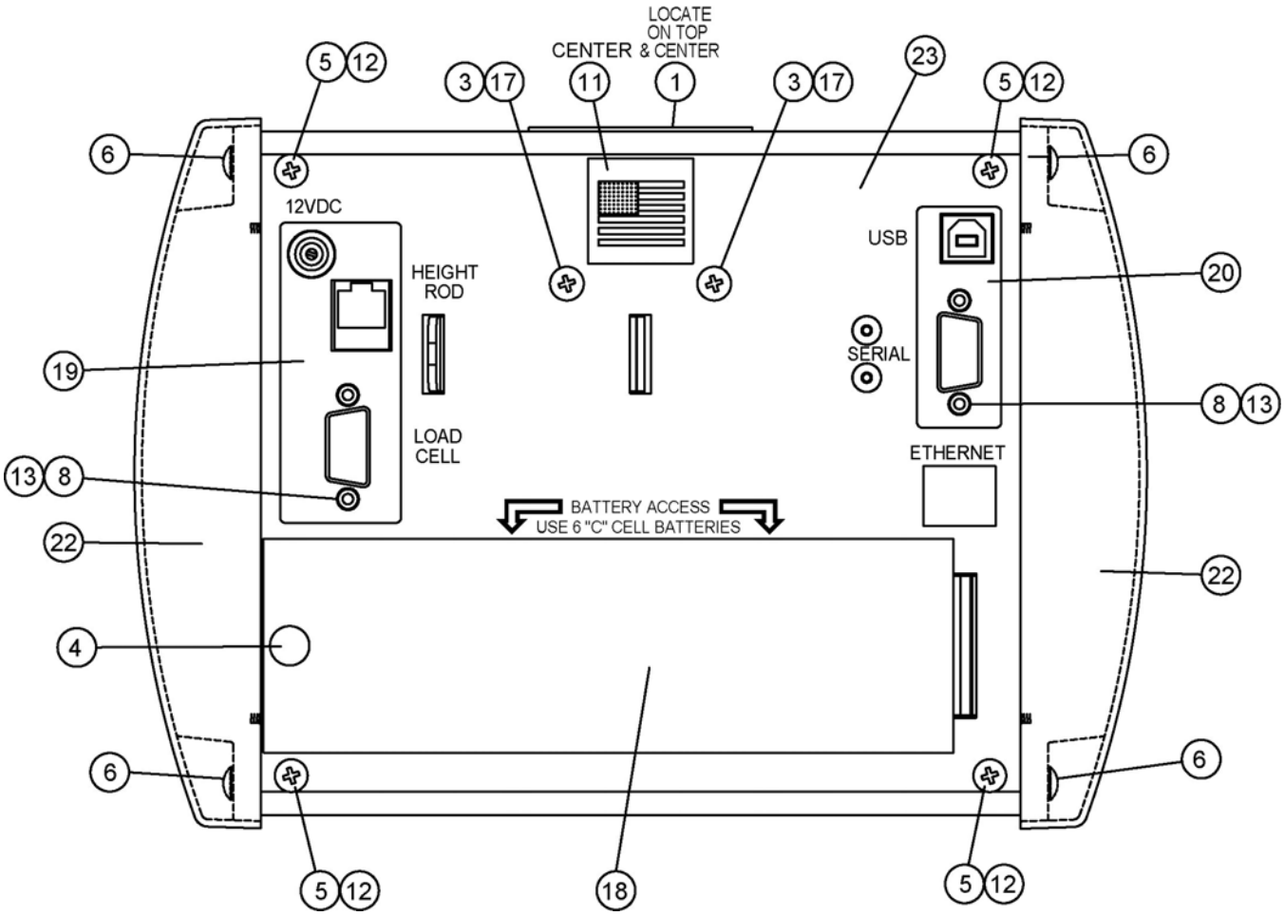
The configuration counter is incremented when a value in the configuration part of setup is changed (Hold, bAnd, PUO, nICAd, SLEEP, ASH). The counter is only incremented 1 time even if more than one parameter is changed each time through setup.

To Review the Event Counter:

1. If indicator is on, press the **ON/OFF** key.
2. Press and hold the **UNITS** key and then press the **ON/OFF** key.
3. The indicator will perform a display test (turn on all digits), show the software version for a few seconds and then change to show CAL 1 and CHC.
4. Release the **UNITS** key.
5. The display will then show two 3-digit numbers.
   - The left number represents the setup Calibration counter.
   - The right number represents the Configuration counter.
6. To return to the normal operation, press the **UNITS** key.
7. Otherwise press the **ON/OFF** key to turn off the indicator.

PARTS IDENTIFICATION

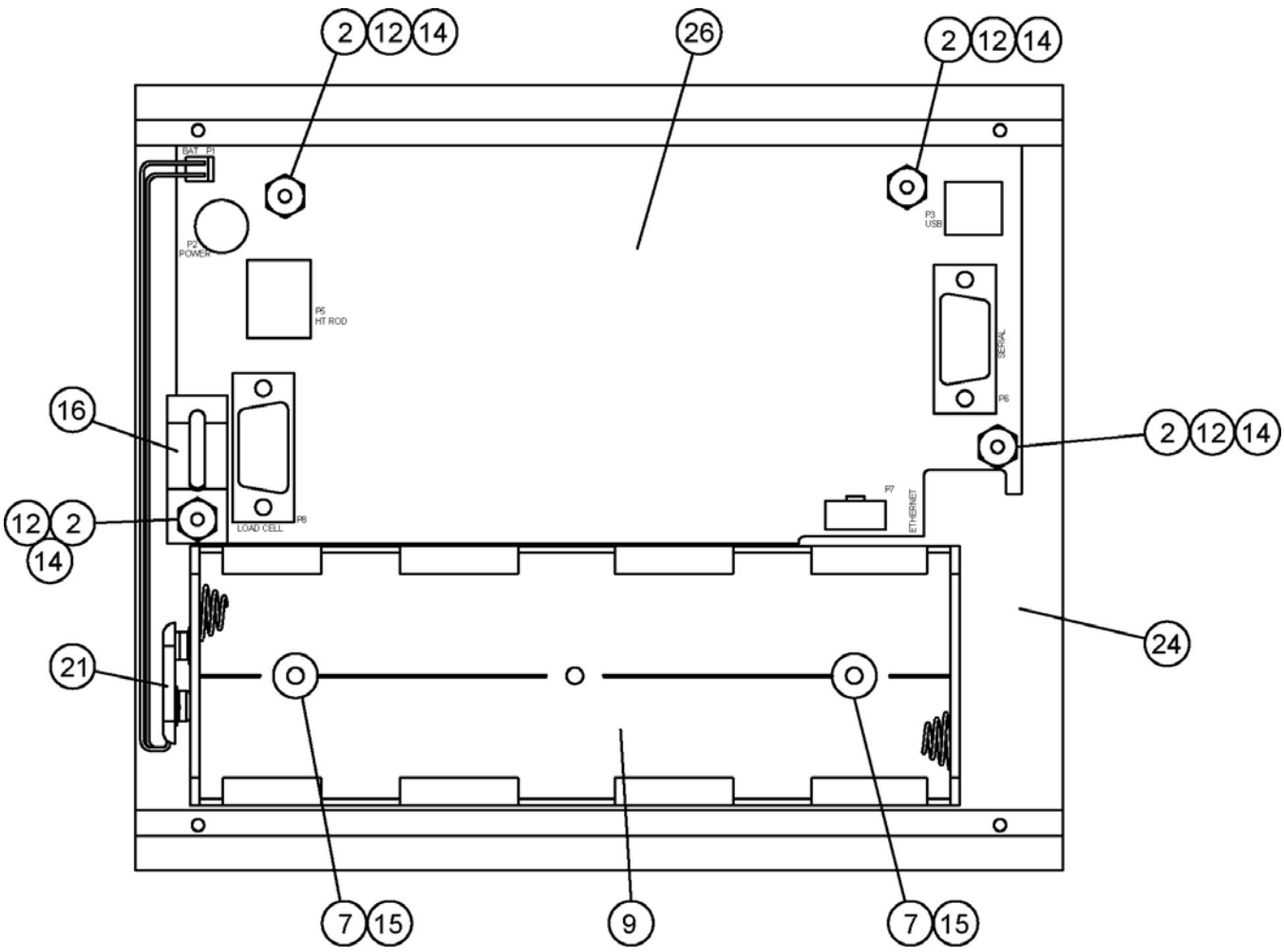
Rear View Detail



ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	593GR986	SERIAL TAG ASSEMBLY
3	2	6021-0687	SCW TRUSS HEAD #6-32 X .375 THMS
4	1	6021-1032	THUMB SCRW, 6-32 X 0.25
5	4	6021-2069	SCW TRUSS HEAD SHEET METAL #6 X .50 (WHITE)
6	4	6021-6008	SCW TRUSS HEAD SHEET-METAL #6 X.375” (BLACK)
8	4	6610-2000	JACK SOCKET
11	1	6650-0087	LABEL: MADE IN THE USA
12	8	6680-0004	WASHER LOCK INT. TOOTH #6 Z/P
13	4	6680-0052	WASHER LOCK HELICAL #4 Z/P
17	2	8555-B159-08	SPACER, 758C MOUNT
18	1	8555-B166-08	BATTERY COVER
19	1	8555-B445-08	BOX, THREE CONNECTOR
20	1	8555-B446-08	BOX, TWO CONNECTOR
22	2	8555-C213-08	END CAP
23	1	8555-C448-0A	REAR PANEL ASSEMBLY

PARTS IDENTIFICATION, CONT.

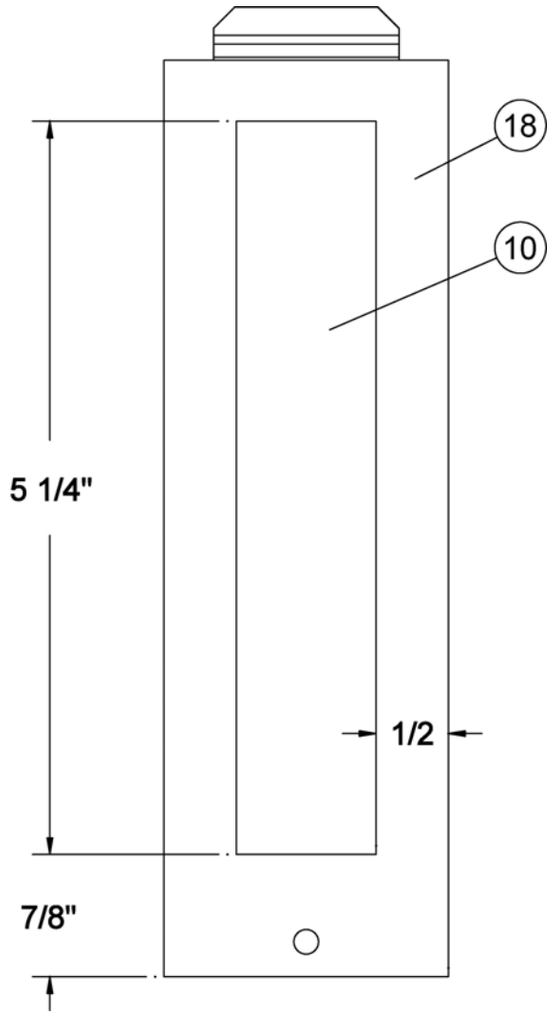
Inside Rear View Detail



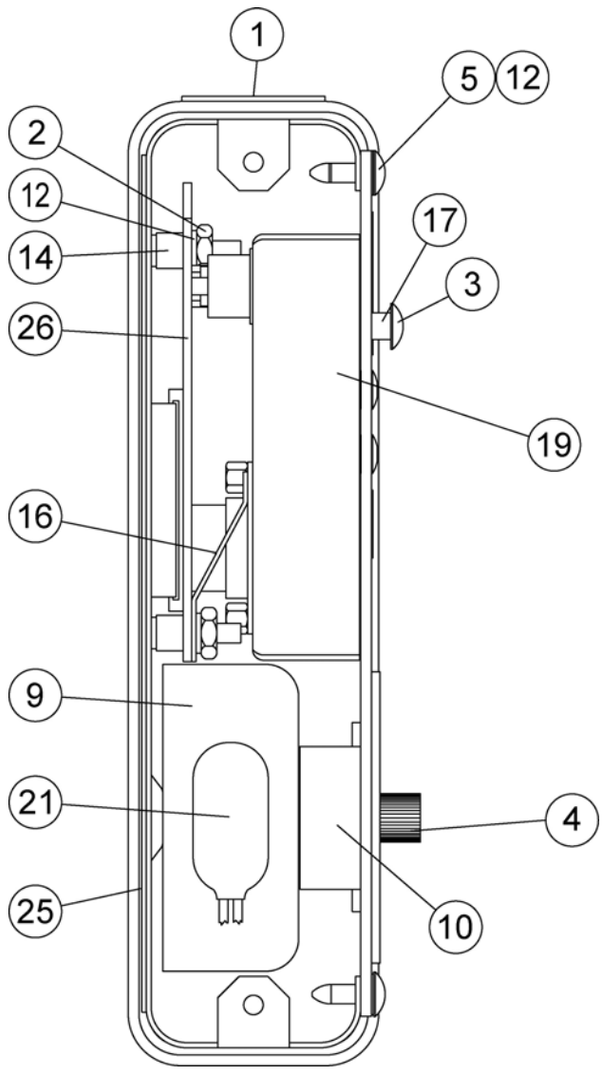
ITEM	QTY.	PART NUMBER	DESCRIPTION
2	4	6013-0039	NUT HEX #6-32
7	2	6024-0126	WASHER FLAT FOR 5/32” POP RIVET
9	1	6610-5119	BATTERY HOLDER 6-C CELLS
12	8	6680-0004	WASHER LOCK INT. TOOTH #6 Z/P
14	4	6680-0138	SPACER #6 X .187 NYLON
15	2	6680-0214	POP RIVET BH AL 5/32 DIA
16	1	8200-B369-08	GROUND SPRING
21	1	8555-B461-0A	CABLE: BATTERY
24	1	8555-C450-0A	FRONT PANEL WELDMENT
26	1	8555-D444-0A	BOARD ASSEMBLY – 758C

PARTS IDENTIFICATION, CONT.

Battery Cover Detail



Side View Detail



ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	593GR986	SERIAL TAG ASSEMBLY
2	4	6013-0039	NUT HEX #6-32
3	2	6021-0687	SCW TRUSS HEAD #6-32 X .375 THMS
4	1	6021-1032	THUMB SCRW, 6-32 X 0.25
5	4	6021-2069	SCW TRUSS HEAD SHEET METAL #6 X .50 (WHITE)
9	1	6610-5119	BATTERY HOLDER 6-C CELLS
10	1	6650-0018	GASKET MATERIAL 1” X 1/2” X 5 1/4”
12	8	6680-0004	WASHER LOCK INT. TOOTH #6 Z/P
14	4	6680-0138	SPACER #6 X .187 NYLON
16	1	8200-B369-08	GROUND SPRING
17	2	8555-B159-08	SPACER, 758C MOUNT
18	1	8555-B166-08	BATTERY COVER
19	1	8555-B445-08	BOX, THREE CONNECTOR
21	1	8555-B461-0A	CABLE: BATTERY
25	1	8555-D202-08	KEYPAD: 758C
26	1	8555-D444-0A	BOARD ASEMBLY – 758C

STATEMENT OF LIMITED WARRANTY

Detecto Scale warrants its equipment to be free from defects in material and workmanship as follows: Detecto warrants to the original purchaser only that it will repair or replace any part of equipment which is defective in material or workmanship for a period of one **(1) year** from date of shipment. Detecto shall be the sole judge of what constitutes a defect.

During the **first ninety (90) days** Detecto may choose to supply all necessary replacement parts and service during normal weekday working hours at no charge to the buyer.

After the first ninety (90) days Detecto will supply parts and service at the job site provided the owner agrees to pay the Dealer for all travel time, including mileage and test equipment, as well as any expenses incurred over the direct labor of the technician at the job site. This limited warranty honors only labor performed by Detecto authorized dealers.

This warranty does not apply to peripheral equipment not manufactured by Detecto; this equipment will be covered by certain manufacturer's warranty only.

This warranty does not include replacement of expendable or consumable parts. This does not apply to any item which has deteriorated or damaged due to wear, accident, misuse, abuse, improper line voltage, overloading, theft, lightning, fire, water or acts of God, or due to extended storage or exposure while in purchaser's possession. This warranty does not apply to maintenance service. Purchased parts will have a ninety (90) day repair or replacement warranty only.

Detecto may require components be returned to the factory; they must be properly packed and shipping charges prepaid. A return authorization number must be obtained for all returns and marked on the outside of all returned packages. Detecto accepts no responsibility for loss or damage in transit.

STATEMENT OF LIMITED WARRANTY

Conditions Which Void Limited Warranty

This warranty shall not apply to equipment which:
A.) Has been tampered with, defaced, mishandled or have had repairs and modifications not authorized by Detecto.
B.) Has had serial number altered, defaced, or removed.
C.) Has not been grounded according to Detecto's recommended procedure.

Freight Carrier Damage

Claims for equipment damaged in transit must be referred to the freight carrier in accordance with freight carrier regulations.

This warranty sets forth the extent of our liability for breach of any warranty or deficiency in connection with the sale or use of the product. Detecto will not be liable for consequential damages of any nature, including but not limited to, loss of profit, delays or expenses, whether based on tort or contract. Detecto reserves the right to incorporate improvements in material and design without notice and is not obligated to incorporate improvements in equipment previously manufactured.

The foregoing is in lieu of all other warranties, express or implied including any warranty that extends beyond the description of the product including any warranty of merchantability or fitness for a particular purpose. This warranty covers only those Detecto products installed in the forty-eight (48) contiguous continental United States.

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